Rv1964, Rv1965, *mce3*, Rv1967, Rv1968, Rv1969, *lprM*, Rv1971, Rv1972, Rv1973, Rv1974, Rv1975, Rv1976c, Rv1977, *ephA*, Rv3618, Rv3619c, Rv3620c, Rv3621c, Rv3622c, *lPqG*, *cobL*, Rv2073c, Rv2074, Rv2075, *echAl*, Rv0223c, RvD1-ORF1, RvD1-ORF2, Rv2024c, plcD, RvD2-ORF1, RvD2-ORF2, RvD2-ORF3, or Rv1758.

2. (Amended) The nucleotide or polynucleotide sequences as claimed in claim 1 grouped together in nucleotide regions RD5 to RD10 and RvD1 and RvD2 according to the following distribution:

(A) RD5: Rv2346c, Rv2347c, Rv2348c, *plcC*, *plcB*, *plcA*, Rv2352c, Rv2353c;

(B) RD6: Rv3425, Rv3426, Rv3427c, Rv3428c;

(C) RD7: Rv1964, Rv1965, *mce3*, Rv1967, Rv1968, Rv1969, *lprM*, Rv1971, Rv1972, Rv1973, Rv1974, Rv1975, Rv1976c, Rv1977;

(D) RD8: *ephA*, Rv3618, Rv3619c, Rv3620c, Rv3621c, Rv3622c, *lpqG*;

(E) RD9: *cobL*, Rv2073c, Rv2074, Rv2075c;

(F) RD10: *echAl*, Rv0223c;

(G) RvD1: RvD1-ORF1, RvD1-ORF2, Rv2024c; and

(H) RvD2: *plcD*, RvD2-ORF1, RvD2-ORF2, RvD2-ORF3, Rv1758.

3. (Amended) A method for the discriminatory detection and identification of *M. bovis* BCG/*M. bovis* or *M. tuberculosis* in a biological sample, comprising:

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A1

(A) isolating the DNA from the biological sample to be analyzed or production of a cDNA from the RNA of the biological sample;

(B) detecting the DNA sequences of the mycobacterium present in said biological sample; and

(C) analyzing said sequences with the nucleotide and polynucleotide sequences as claimed in claim 1.

4. (Amended) The method as claimed in claim 3, wherein the detection of the mycobacterial DNA sequences is carried out using nucleotide sequences complementary to said DNA sequences.

5. (Amended) The method as claimed in claim 3, wherein the detection of the mycobacterial DNA sequences is carried out by amplifying the sequences using primers.

6. (Amended) The method as claimed in claim 5, wherein the primers have a nucleotide sequence chosen from the group comprising SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3, SEQ ID No. 4, SEQ ID No. 5, SEQ ID No. 6, SEQ ID No. 7, SEQ ID No. 8, SEQ ID No. 9, SEQ ID No. 10, SEQ ID No. 11, SEQ ID No. 12, SEQ ID No. 13, SEQ ID No. 14, SEQ ID No. 15, SEQ ID No. 16, SEQ ID No. 17, and SEQ ID No. 18 wherein:

(A) the pair SEQ ID No. 1/SEQ ID No. 2 is specific for RD4;

(B) the pair SEQ ID No. 3/SEQ ID No. 4 is specific for RD5;

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A1

(C) the pair SEQ ID No. 5/SEQ ID No. 6 is specific for RD6;

(D) the pair SEQ ID No. 7/SEQ ID No. 8 is specific for RD7;

(E) the pair SEQ ID No. 9/SEQ ID No. 10 is specific for RD8;

(F) the pair SEQ ID No. 11/SEQ ID No. 12 is specific for RD9;

(G) the pair SEQ ID No. 13/SEQ ID No. 14 is specific for RD10;

(H) the pair SEQ ID No. 15/SEQ ID No. 16 is specific for RvD1; and

(I) the pair SEQ ID No. 17/SEQ ID No. 18 is specific for RvD2.

A2

8. (Amended) A method for the discriminatory detection and identification of *M. bovis* BCG/*M. bovis* or *M. tuberculosis* in a biological sample, comprising:

(A) bringing the biological sample to be analyzed into contact with at least one pair of primers as defined in claim 6, the DNA contained in the sample having been, where appropriate, made accessible to the hybridization beforehand;

(B) amplifying the DNA of the mycobacterium; and

(C) visualizing the amplification of the DNA fragments.

9. (Amended) A kit for the discriminatory detection and identification of *M. bovis* BCG/*M. bovis* or *M. tuberculosis* in a biological sample comprising:

(A) at least one pair of primers as defined in claim 6;

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A2

(B) reagents necessary to carry out a DNA amplification reaction; and

(C) optionally, the necessary components, which make it possible to verify or compare the sequence, the size of the amplified fragment, or both the sequence and the size of the amplified fragment.

10. (Amended) A method of amplifying a DNA sequence from *M. bovis* BCG/*M. bovis* or *M. tuberculosis* comprising hybridizing at least one of the pair of primers of claim 6 to the DNA sequence.

11. (Amended) A product of expression of all or part of a nucleotide or polynucleotide sequence deleted from the genome of *M. bovis* BCG/*M. bovis* and present in *M. tuberculosis* or a product of expression of all or a part of an ORF or gene of claim 1.

12. (Amended) A method for the discriminatory detection *in vitro* of antibodies directed against *M. bovis* BCG/*M. bovis* or *M. tuberculosis* in a biological sample, comprising:

(A) bringing the biological sample into contact with at least one product as defined in claim 11, and

(B) detecting the antigen-antibody complex formed.

13. (Amended) A method for the discriminatory detection of a vaccination with *M. bovis BCG* or an infection by *M. tuberculosis* in a mammal, comprising:

(A) preparing a biological sample containing cells,

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A2

(B) incubating the biological sample with at least one product as defined in claim 11, and

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(C) detecting a cellular reaction indicating prior sensitization of the mammal to said product, wherein the cellular reaction is cell proliferation, synthesis of proteins, or both cell proliferation and synthesis of proteins such as gamma interferon.

14. (Amended) A kit for the *in vitro* diagnosis of an *M. tuberculosis* infection in a mammal optionally vaccinated beforehand with *M. bovis* BCG comprising:

(A) a product as defined in claim 11;

(B) where appropriate, reagents for the constitution of the medium suitable for the immunological reaction;

(C) reagents allowing the detection of the antigen-antibody complexes produced by the immunological reaction;

(D) where appropriate, a reference biological sample (negative control) free of antibodies recognized by said product; and

(E) where appropriate, a reference biological sample (positive control) containing a predetermined quantity of antibodies recognized by said product.

15. (Amended) A mono- or polyclonal antibody, or its chimeric fragments or antibodies, wherein the antibodies or fragments are capable of specifically recognizing a product as defined in claim 11.

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A2

16. (Amended) A method for the discriminatory detection of the presence of an antigen of *M. bovis* BCG/ *M. bovis* or *M. tuberculosis* in a biological sample comprising:

(A) bringing the biological sample into contact with an antibody as claimed in claim 15; and

(B) detecting the antigen-antibody complex formed.

17. (Amended) A kit for the discriminatory detection of the presence of an antigen of *M. bovis* BCG/*M. bovis* or *M. tuberculosis* in a biological sample comprising:

(A) an antibody as claimed in claim 15;

(B) reagents for constituting the medium suitable for the immunological reaction; and

(C) reagents allowing the detection of the antigen-antibody complexes produced by the immunological reaction.

18. (Amended) An immunological composition, comprising at least one product as defined in claim 11, and a pharmaceutically compatible vehicle.

19. (Amended) The vaccine of claim 18, further comprising one or more immunity adjuvants.

20. (Amended) A method for the discriminatory detection and identification of *M. bovis* BCG or *M. tuberculosis* in a biological sample comprising the following steps:

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A2

(A) digesting with *Hin*dIII, of at least part of the genome of the mycobacterium present in a biological sample to be analyzed; and

(B) analyzing restriction fragments thus obtained.

21. (Amended) The method as claimed in claim 20, wherein the analysis of the restriction fragments comprises counting said fragments, determining the length of said fragments, or both counting said fragments and determining the length of said fragments.

22. (Amended) The method of detection as claimed in claim 20, wherein the analysis of the restriction fragments comprises bringing the fragments into contact with at least one probe under stringent hybridization conditions and identifying the fragments hybridized.

23. (Amended) The method as claimed in claim 22, wherein the probe is obtained by amplification of the genomic DNA with primers chosen from the group SEQ ID No. 31, SEQ ID No. 32, SEQ ID No. 33, or SEQ ID No. 34 with the pair:

(A) SEQ ID No. 31/SEQ ID No. 32 specific for DU1; or

(B) SEQ ID No. 33/SEQ ID No. 34 specific for DU2.

A3

25. (Amended) The method as claimed in claim 20, wherein the analysis of the fragments obtained comprises amplification with primers and sequencing, wherein the primers are chosen from the group SEQ ID No. 19, SEQ ID No. 20, SEQ ID No. 21, SEQ ID No. 22, SEQ ID No. 23, SEQ ID No. 24, SEQ ID No. 25, SEQ ID No. 26, SEQ

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A3

ID No. 27, SEQ ID No. 28, SEQ ID No. 35, SEQ ID No. 36, SEQ ID No. 37, and SEQ ID No. 38, wherein

(A) SEQ ID No. 19, SEQ ID No. 20/SEQ ID No. 21 are specific for JDU1;

(B) SEQ ID No. 22, SEQ ID No. 24/SEQ ID No. 23, SEQ ID No. 25 are specific for JDU2A;

(C) SEQ ID No. 26/SEQ ID No. 27, SEQ ID No. 28 are specific for JDU2B

(D) SEQ ID No. 36, SEQ ID NO. 37, SEQ ID No. 38 are specific for DU1.

Please add the following new claims:

A4

25. (NEW) The method of claim 13, wherein the biological sample containing cells is a sample of cells of the immune system.

26. (NEW) The method of claim 25, wherein the cells of the immune system are T cells.

27. (NEW) The method of claim 13, wherein the cellular reaction detected is synthesis of gamma-interferon.

REMARKS

Entry of this Amendment prior to examination is respectfully requested. The amendments to the claims were made to conform with United States patent practice. They do not add new matter to the claims.

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